# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005


Job No.: CTCE/BBMP/BAK/INW No.1976/Soil/2017-18 03.09.2016

## TEST REPORT ON DRY DENSITY OF SOIL IN PLACE BY THE CORE - CUTTER METHOD

| | | |
|---|---|---|
| * Customer | : | **Asst. Executive Engineer,** Lakes, BBMP, Bangalore. |
| * Agency | : | **Mr. Balakrishna Arun Kumar,** #316,25th cross, Banashankari 2nd Stage, Bangalore-560070. |
| * Name of work | : | Development of Doddabommasandra Lake Phase-2, BBMP, Bangalore. |
| * Reference | : | AEE/Lakes/PR/97/2016-17 Dated: 22.08.2016 |
| * Sample ID | : | SOIL |
| Technical Reference | : | IS : 2720 - (Part 29) 1974 (RA-2010) |
| Date of Test | : | 02.09.2016 |

| | | |
|---|---|---|
| Max.Dry Density g/cc | : | 1.96 |
| Optium Moisture Content (%) | : | 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 2m depth |
| Chainage | 100m |
| Wt of empty Cylinder in grams | 951 |
| Cylinder + Wet Soil in grams | 2930 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.94 |
| Moisture Content (%) | 3.82 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.87 |
| Field compaction achieved (%) | 95.30 |
| Required Compaction (%) | 95.0 |

*Information is furnished by the Customer/Representative

**Note:**

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**Civil-tech Consultants & Engineers**
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Shanth. Ganapathinagar,
Basaveshwaranagar, Bangalore-560 079.

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| Date of Test | : | 02.09.2016 |

| | | |
|---|---|---|
| Max.Dry Density g/cc | : | 1.96 |
| Optium Moisture Content (%) | : | 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 2m depth |
| Chainage | 200m |
| Wt of empty Cylinder in grams | 898 |
| Cylinder + Wet Soil in grams | 2882.5 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.94 |
| Moisture Content (%) | 3.09 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.89 |
| Field compaction achieved (%) | 96.24 |
| Required Compaction (%) | 95.0 |

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| * Sample ID | : | SOIL |
| Technical Reference | : | IS : 2720 - (Part 29) 1974 (RA-2010) |
| Date of Test | : | 02.09.2016 |

| | | |
|---|---|---|
| Max.Dry Density g/cc | : | 1.96 |
| Optium Moisture Content (%) | : | 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 2m depth |
| Chainage | 250m |
| Wt of empty Cylinder in grams | 938.5 |
| Cylinder + Wet Soil in grams | 2931 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.95 |
| Moisture Content (%) | 3.26 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.89 |
| Field compaction achieved (%) | 96.47 |
| Required Compaction (%) | 95.0 |

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| * Agency | : Mr. Balakrishna Arun Kumar, #316,25th cross, Banashankari 2nd Stage, Bangalore-560070. |
| * Name of work | : Development of Doddabommasandra Lake Phase-2, BBMP, Bangalore. |
| * Reference | : AEE/Lakes/PR/97/2016-17 Dated: 22.08.2016 |
| * Sample ID | : SOIL |
| Technical Reference | : IS : 2720 - (Part 29) 1974 (RA-2010) |
| Date of Test | : 02.09.2016 |

| | |
|---|---|
| Max.Dry Density g/cc | : 1.96 |
| Optium Moisture Content (%) | : 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 2m depth |
| Chainage | 300m |
| Wt of empty Cylinder in grams | 893.5 |
| Cylinder + Wet Soil in grams | 2862 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.93 |
| Moisture Content (%) | 3.02 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.87 |
| Field compaction achieved (%) | 95.53 |
| Required Compaction (%) | 95.0 |

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| Max.Dry Density g/cc | : | 1.96 |
| Optium Moisture Content (%) | : | 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 2m depth |
| Chainage | 350m |
| Wt of empty Cylinder in grams | 862 |
| Cylinder + Wet Soil in grams | 2842.56 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.94 |
| Moisture Content (%) | 3.91 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.87 |
| Field compaction achieved (%) | 95.29 |
| Required Compaction (%) | 95.0 |

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|---|---|---|
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| Optium Moisture Content (%) | : | 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 4m depth |
| Chainage | 50m |
| Wt of empty Cylinder in grams | 966 |
| Cylinder + Wet Soil in grams | 2939 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.93 |
| Moisture Content (%) | 3.20 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.87 |
| Field compaction achieved (%) | 95.58 |
| Required Compaction (%) | 95.0 |

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| Optium Moisture Content (%) | : | 11.90 |

| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 4m depth |
| Chainage | 50m |
| Wt of empty Cylinder in grams | 865 |
| Cylinder + Wet Soil in grams | 2858 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.95 |
| Moisture Content (%) | 3.01 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.90 |
| Field compaction achieved (%) | 96.73 |
| Required Compaction (%) | 95.0 |

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| DETERMINATION OF WET DENSITY | |
|---|---|
| Location | Main bund 4m depth |
| Chainage | 50m |
| Wt of empty Cylinder in grams | 962 |
| Cylinder + Wet Soil in grams | 2923 |
| Volume of the Cylinder in $Cm^3$ | 1020.50 |
| Insitu Bulk density Wet excavated soil Y=w/v | 1.92 |
| Moisture Content (%) | 2.27 |
| **DETERMINATION OF DRY DENSITY** | |
| Field dry Density (g/cc) | 1.88 |
| Field compaction achieved (%) | 95.86 |
| Required Compaction (%) | 95.0 |

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